

IN THE SPECIFICATION

Please replace the paragraph on page 2, lines 12-21, with the following replacement paragraph.

A1 By the methods disclosed in these documents, authentication information is embedded using a hash ~~hush~~ function and so on to detect whether or not alteration being added to image data. If alteration is performed by using a hash ~~hush~~ function to a part of image data in which authentication information is embedded, this alteration influences the entire image data. Thus, while this method can detect alteration being added to some part of image data, it cannot concretely detect and indicate which part of the image data the alteration is added to.

Please replace the two paragraphs from page 3, line 1, to page 4, line 4, with the following replacement paragraphs.

A2 The contents alteration detection apparatus involved in the present invention is a contents alteration detection apparatus having a data filling apparatus and a detection apparatus, the data filling apparatus filling certain embedding data to contents data being objective to embed the embedding data, the detection apparatus detecting whether alteration was added to the contents data or not, the data filling apparatus, comprising a contents data dividing means for dividing at least a part of the contents data into a plurality of first blocks and a data filling means for filling each of certain first embedding data to each of the divided first blocks to generate a plurality of second blocks having second embedding data, the detection apparatus, comprising a data extracting ~~extrDCTing~~ means for extracting ~~extrDCTing~~ the second embedding data filled in each of at least a part of the second blocks (~~second embedding data~~) and an alteration detecting means for detecting whether or not alteration was added to each of at least a part of the second blocks based on the extracted ~~extrDCTed~~ second embedding data.

Preferably, the contents alteration detection apparatus has a data filling apparatus and a detection apparatus, the data filling apparatus filling certain embedding data to image data, the detection apparatus detecting whether alteration was added to the image data or not, the data filling apparatus, comprising an image dividing means for dividing the image data into a plurality of

A2
first image blocks and a data filling means for filling each of certain first embedding data to each of the divided first image blocks to generate a plurality of second image blocks having second embedding data, the detection apparatus, comprising a data extracting ~~extrDCTing~~ means for extracting ~~extrDCTing~~ second embedding data filled in each of the second image blocks (~~second embedding data~~) and an alteration detecting means for detecting whether or not alteration was added to each of the second image blocks based on the extracted ~~extrDCTed~~ second embedding data.

Please replace the two paragraphs from page 4, line 24, to page 5, line 3, with the following replacement paragraphs.

A3
Preferably, the data extracting ~~extrDCTing~~ means extracts ~~extrDCTs~~ as the second embedding data, from each of the plurality of second image blocks, the data represented according to the certain rule by the relationship between or among the plurality of unit data values contained in each of the second image blocks.

Preferably, the alteration detecting means detects whether or not alteration was added to each of the second image blocks based on results of comparison between the embedded first embedding data and the extracted ~~extrDCTed~~ second embedding data.

Please replace the paragraph from page 10, line 30, to page 11, line 7, with the following replacement paragraph.

A7
Accordingly, if the embedding data (second embedding data) is extracted ~~extrDCTed~~ from an image to which alteration was possibly added, and decision by majority is made as to which value of 1 or 0 each of 64 pairs corresponding to the same bit as that of the embedding data (first embedding data) represents according to the certain rule, it may be determined that the value represented by the majority of pairs is the value of the embedding data (first embedding data) filled by the data filling apparatus.

Please replace the three paragraphs from page 11, line 14, to page 12, line 2, with the following replacement paragraphs.

The detection apparatus involved in the present invention exploits such nature of embedding data, and it extracts ~~extr~~DCTs, from each of the pairs of DCT coefficients (second embedding data) to which alteration was possibly added, the embedding data (second embedding data) of which value may be changed from the initially embedded value as a result of alteration.

As- In addition, the detection apparatus detects, based on these extraction ~~extr~~DCTion results, to which pairs of DCT coefficients (second image data) alteration was added, namely, to which part of image data alteration was added.

The data extracting ~~extr~~DCTing means extracts ~~extr~~DCTs a value represented according to the ceratin rule by the mutually corresponding DCT coefficients (unit data) contained in each of two sets of DCT coefficients of the pair (second image block) to which alteration was possibly added after the embedding data (first embedding data) was embedded by the data filling apparatus involved in the present invention.
